

Andrew Schechtman-Rook

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<https://github.com/AndrewRook>

RELEVANT PROJECTS

Ptplot: <https://github.com/AndrewRook/ptplot>

- Python package for quickly creating interactive visualizations of player tracking data.
- Visualizations can be viewed in notebooks or embedded in websites.

NFLDash: <https://andrewrook.github.io/NFLDash>

- Web dashboard allowing users to interactively filter events on 15+ dimensions, then export results to disk.
- Built in HTML and Javascript with d3.js and crossfilter.js.

NFLWin: <https://github.com/AndrewRook/NFLWin>

- Python package for calculating Win Probability of NFL data.
- One of the first fully open (code & algorithm) published Win Probability models.

WORK EXPERIENCE

Director, Data Science

2023-Present

Capital One

- Designed and built a package to streamline core business metrics SQL calculations, used by over 50 analysts for critical reporting needs.
- Owned the design, implementation, and upkeep of the DS Technical Interview, a key interview given to every data science candidate in the US.

Senior Manager, Data Science

2018-2023

Capital One

- Guided ongoing development of the core credit card valuations model scoring platform, delivering regular releases of new and updated models while improving the robustness and maintainability of platform infrastructure.
- Led technical development of model monitoring tools, mentoring three junior data scientists to deliver a maintainable package on time and to spec.
- Deployed the first cloud-based credit card underwriting model in the company via a dockerized Python API, with an estimated incremental value of \$35MM per year.

Manager, Data Science

2016-2018

Capital One

- Led development of a prototype language-agnostic automated machine learning model deployment framework for cloud-based applications, influencing the development direction for the company-wide credit card application processing platform.
- Created the longest-lived, most successful internal data science tool in the company, used in production models by dozens of data scientists across multiple lines of business.

Principal Data Scientist

2014-2016

Capital One Labs

- Implemented a novel approach to deliver internal technical trainings, providing over 5000 hours of classes with no instructors.
- Programmed and deployed an interactive course completion dashboard using Flask and dc.js to provide progress reports to individual students as well as company leadership.

TECHNICAL SKILLS

Programming: Python (numpy, scipy, pandas, sklearn, xgboost, matplotlib, pytorch), Javascript, shell scripting

Databases, Orchestration, Web Design: Flask, MySQL/PostgreSQL, Prefect, Snowflake

Cloud Computing/Devops: AWS, Docker, CircleCI, Jenkins, GitHub Actions

Operating Systems: Linux, Mac

Data Analysis: Parallel and distributed computing, machine learning, hypothesis testing, nonlinear optimization

EDUCATION

PhD, Astronomy, University of Wisconsin-Madison

December 2013

MS, Astronomy, University of Wisconsin-Madison

June 2009

BS, Astronomy, Case Western Reserve University

May 2007